Issue 1n: *Are there superior alternatives to Christensen's method of calculating TFP?*

The Christensen attachment to the comments of USTA offers a simplified TFP methodology that relies on publicly available data.[51] In many instances, Christensen uses proxies for LEC proprietary data that not only meet the Commission's criteria for an economically meaningful, administratively simple methodology, but also addresses many of the concerns expressed in the Fourth Further Notice with respect to the re-introduction of perverse incentives. To the extent that such proxies are used, LEC behavior will have no measurable impact on the TFP calculations, and therefore concerns about strategic behavior disappear.

3. Other X-Factor Calculation Methods.

Although the Commission has tentatively decided to adopt a TFP-derived productivity offset, its seeks comment on other methodologies for calculating the X-Factor. In the first phase of this proceeding, for example, AT&T proposed its own model for setting the X-Factor called the "Direct Model,"[52] which the Commission has re-designated the "Historical Revenue Method."[53] Alternatively, the Commission has sought comment on an "Historical Price" method of deriving X-Factors, also known as the "Frentrup-Uretsky" method.[54] For the reasons set forth below, BellSouth urges the Commission to reject these

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51. USTA Comments, Attachment A.

52. See First Report and Order, 10 FCC Rcd at 9019, ¶¶ 127-28.

53. Fourth Further Notice at ¶ 77.

54. Id. at ¶¶ 84-90.

alternative methodologies. Neither approach develops the X-Factor with the same accuracy and simplicity as USTA's proposed TFP methodology.[55/]

Issue 2a: *Is the Historical Revenue Method superior to a TFP-based approach for developing an X-Factor?*

AT&T's proposed Historical Revenue method essentially determines the X-Factor that would be needed to reprice LECs' access services to achieve an 11.25% rate of return for the LEC industry as a whole under price caps.[56/] This approach is both conceptually and administratively flawed, and should be rejected by the Commission.

First, an X-Factor approach that would reprice access services over an historical period to achieve a targeted rate of return is an utterly inappropriate retreat into earnings-based regulation that is fundamentally inconsistent with the entire theoretical underpinning of a price cap plan. The purpose of price cap regulation is to sever the link between prices and earnings, and to curtail the perverse incentives that historically have attended rate of return regulation.[57/] Indeed, for this reason, the Commission has tentatively concluded that the sharing feature of its hybrid LEC plan -- which perpetuated rate of return-based inefficiencies -- should not be present in a longer term plan.[58/] A Commission decision to re-introduce an earnings-based estimate of X five years after the

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55. USTA Comments, Attachment C, NERA Study, at 23-33.

56. Fourth Further Notice at ¶ 78 (citing First Report and Order, 10 FCC Rcd at 9019, ¶¶ 127-28).

57. Under a pure price caps system -- unlike rate-of-return regulation -- cost padding and cross-subsidization do not justify higher prices. Instead, such behavior actively decreases carrier profits, and there is therefore no incentive to engage in it. See AT&T Price Caps Order at 2893, ¶ 36; see also LEC Price Cap Order, 5 FCC Rcd at 6790-91.

58. First Report and Order, 10 FCC Rcd at 9047, ¶ 193.

Commission's decision to move away from cost-based regulation would seriously undermine the performance foundation of price regulation.

The Historical Revenue approach also poses serious administrative problems related to the determination of an "authorized" rate of return for a price cap plan. As USTA has observed, earnings-based methods of calculating the X-Factor rely on complicated jurisdictional and cost allocation schemes and accounting conventions such as depreciation rates that do not reflect the rapid obsolescence of high-tech equipment.[59/] The TFP approach, by contrast, is based on industry-wide economic performance measures, is simpler to administer, and meshes with the economic-based decision-making of competitive firms.[60/]

Issue 2b: *Is the Historical Price Method superior to the TFP approach for developing X-Factor?*

The Commission also seeks comment on the Historical Price Method of calculating the X-Factor. The Commission staff performed two studies that together

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59. USTA Comments at 8. In the first phase of this proceeding, BellSouth pointed out that, unlike the other carriers it oversees, the Commission has consistently prescribed depreciation rates for the large LECs that are much lower than those proposed by the carriers. For example, had the Commission permitted BellSouth to book the depreciation rates deemed appropriate by BellSouth management for 1992, BellSouth's reported earnings of 12.8% would have declined to 11.4%. BellSouth's 1992 reported earnings were inflated by a total of 140 basis points simply because the Commission substituted its judgment for carrier management as to the appropriate rate to depreciate BellSouth's plant and equipment. Comments of BellSouth, CC Docket No. 94-1 (May 9, 1994), at 42; see also Strategic Policy Research, "Regulatory Reform for the Information Age" (Jan. 11, 1994), at 39 ("SPR Vision Paper") (observing that "underdepreciation of LEC plant amounts to a huge sum," and concluding that in order to put the LEC industry "on the same sound footing" as other unregulated high-tech firms, regulators would need to authorize approximately $25 billion of depreciation). BellSouth hereby incorporates the SPR Vision Paper by reference into the record here.

60. Comments of USTA at 9. Additional reasons for rejecting the Historical Revenue Method are detailed in the analysis prepared by Taylor, Tardiff and Zarkadas of NERA, included as Attachment C to the USTA filing. These economists all believe that use of an earnings-based X is inappropriate, and would re-introduce the efficiency disincentives that price regulation is intended to eliminate.

comprised the Historical Price Method. The short run Historical Price Method ("Frentrup-Uretsky") derives an X-Factor (more appropriately described as a "cost-differential" factor) based on historical analysis of recent LEC interstate price trends relative to the economy as a whole.[61/] NERA has compared the relative merits of the Historical Price Method and a TFP method, and has concluded that the TFP method is superior.[62/]

The long-run Historical Price Method ("Spavins-Lande") does share some of the strengths of a TFP approach, e.g., performing the X-Factor calculation on a total company basis. As USTA has observed, however, this methodology is inferior to a TFP approach in at least two respects.

First, by utilizing actual indices of costs and outputs, the TFP approach provides a much more accurate picture of LEC productivity than does an accounting-oriented, cost-differential calculation based on prices. By measuring productivity directly, rather than inferring productivity changes indirectly from price changes, the TFP approach is simpler and more likely to be accurate.[63/]

Second, the Historical Price Method suffers from practical problems of data compilation and adjustment that simply are not present in the simplified Christensen TFP methodology proposed by USTA. The Christensen methodology relies entirely on publicly available and independently verifiable data, and can be updated easily as a moving average.[64/]

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61. Fourth Further Notice at ¶ 85.

62. See USTA Comments, Attachment C, NERA Study, at 29 - 32.

63. See USTA Comments at 10, and Attachment C, NERA Study, at 29 - 32.

64. See id.

For both of these reasons, BellSouth believes that the TFP approach is superior to the Historical Price Method. In any event, if the Historical Price Method is considered, both the long-term and short-term studies should be used.

Issue 2c: *Should the X-Factor in the long-term price cap plan include a consumer productivity dividend?*

In the original LEC Price Cap Order, the Commission included a Consumer Productivity Dividend ("CPD") of 0.5% in the X-Factor as a mechanism to ensure that consumers would benefit immediately in the form of lower rates from the productivity improvements that LEC price caps were expected to generate.[65/] The Commission now asks whether continued inclusion of a CPD in the X-Factor is appropriate in a long-term price cap plan.

If the Commission adopts its tentative conclusion to base future adjustments to the price cap index on a moving average of achieved LEC improvements in TFP, the price cap mechanism will ensure that all of the benefits of price cap regulation ultimately flow to consumers. LECs will be provided incentive to continually improve their productivity because they can profit by "beating the average" in any given year, and from the regulatory lag that occurs before the productivity improvements are reflected in the revised index. Under such a plan, there is no theoretical basis for continuing a CPD. Indeed, under such a plan, continuation of a CPD would mean that the Commission was appropriating more than 100 percent of the benefit of LEC productivity improvements for customers. There is no legal or economic justification for such action.[66/]

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65. LEC Price Cap Order, 5 FCC Rcd at 6799, ¶ 100.

66. See USTA Comments, Attachment C, NERA Study, at 33.

4. Updating of the X-Factor.

Issue 3a: *Should we base the X-Factors in the long-term plan on a moving average, or should we establish fixed X-Factors to be reviewed and revised periodically in performance reviews?*

In the LEC Price Cap Order, the Commission established two X-Factors that remained in effect for the initial four-year period of price cap regulation.[67] In the first phase of this proceeding, the Commission tentatively decided to adopt the proposal by USTA to update the X-Factor annually, based on a moving average of past productivity.[68] BellSouth agrees with this conclusion and urges the Commission to adopt a moving average X-Factor for the duration of price cap regulation of the LECs.

First, it is highly unlikely that price cap regulation for the LECs will be required for many more years. Competition for LEC interstate access services is significant already and will expand exponentially as the major interexchange carriers, competitive access providers, cable companies and wireless carriers follow through on their announced plans to compete vigorously in the provision of such services. The rapid pace at which LEC intrastate services are being opened to competition will provide additional impetus for competition for LEC interstate access services. The moving average X-Factor functions well as a transition mechanism in this dynamic environment, and displaces the need for establishing fixed X-Factors and future performance reviews.

Second, the moving average X-Factor meets all three criteria established in the Fourth Further Notice with respect to the Commission's goals in revising the LEC price cap plan. The Christensen simplified TFP methodology is both more timely and relies more

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67. See LEC Price Cap Order, 5 FCC Rcd at 6835, ¶ 394.

68. See First Report and Order, 10 FCC Rcd at 9030, ¶ 153.

completely on publicly available data than the comprehensive method previously presented, without sacrificing economic significance. The simplified TFP method also will be as effective as any methodology in making the benefits of LEC price cap regulation available to consumers.[69/]

Third, the adoption of a moving average X-Factor will enhance the incentive structure of LEC price cap regulation and will minimize concerns over possible strategic behavior or re-introduction of perverse incentives.[70/] Under the moving average X-Factor, each price cap LEC has an incentive to "beat the average" in any given year in order to improve its earnings. Moreover, any LEC engaging in strategic behavior would not only sacrifice current earnings, but would also see the effect of that strategic behavior diluted over the years through the industry-wide moving average. Price cap LECs also would enter the new methodology with a five year historical base unaffected by any attempt to manipulate the moving-average.[71/]

The use of the Christensen simplified TFP method to calculate the five year moving average will greatly reduce the administrative burden of LEC price cap regulation. The index should be recomputed annually, and any corrections necessary could be introduced at that time. It is unlikely that any corrections in the publicly available data sources would have a material impact on the five year average, and the Commission should expect that such

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69. Now that AT&T has been declared to be non-dominant, the extent to which consumers actually benefit will depend on the pricing behavior of the IXCs.

70. See Fourth Further Notice at ¶ 73.

71. Given these points, if Ad Hoc or other parties persist in contending that "strategic behavior" is a significant concern, they should attempt to quantify how strategic behavior by one LEC would affect a five year moving average of the entire LEC industry. In the absence of any such empirical evidence, such concerns should be dismissed as pure speculation.

corrections would be made in the year following the addition of data to the moving average. Therefore, any data corrections likely would have little impact, and the corrected data would be used in the index calculations for most of the five year average.

Issue 3b: *If we adopt moving average X-Factors, how many years of data should be included in the average?*

BellSouth recommends the use of a five year moving average. While the moving average theoretically should be long enough to encompass an entire business cycle, and recent business cycles have been longer than five years, BellSouth believes that the additional complexity introduced by changing the length of the moving average to track the length of the business cycle would not be worth the extra precision. The use of a period longer than five years also delays the recognition of the competitive dynamics in the X-Factor.

Issue 3c: *If we adopt moving average X-Factors, should there be any lag? If so, how long should that lag be?*

USTA proposed a two-year lag in its moving average calculation, so that data from the third to the seventh years prior to the annual tariff filing would be included in the moving average, but data from the two years immediately preceding the annual filing would not. The need for this lag is because the BLS data upon which X-Factor calculations are based is often not available sooner.[72/] To the extent that data sources with less lag than BLS data are available and appropriate, BellSouth agrees with the Commission that the two-year lag could be reduced. There is no reason for such a lag other than data appropriateness and availability.

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72. Fourth Further Notice at ¶ 102.

Issue 3d: *If we adopt a moving average X-Factor based on TFP, should there be one moving average for the X-Factor, or separate moving averages for distinct components of the TFP calculation?*

As discussed in response to Issue 3a, if the Commission relies on the Christensen simplified TFP method in the X-Factor calculation, there should be at least a five year moving average to smooth out the extreme volatility in the data and eliminate any incentive for strategic behavior. As Christensen and NERA have shown, the long term input price differential is zero. The Commission can avoid the need to deal with the complexity and volatility that would result from the addition of an input price differential to the TFP methodology by simply rejecting the inclusion of any input price differential at all.[73/]

Issue 3e: *If we adopt fixed X-Factors, on what time period should the studies to determine the X-Factor be based?*

The Commission relied exclusively on long term data to calibrate the AT&T price cap formula, and it imposed no X-Factor at all in the cable television price cap plan. If the Commission chooses to rely on short term data to calculate a fixed X-Factor, that data should include the entire post-divestiture period and should be averaged with the result of a long term study. In this regard, the Spavins-Lande model, included in the LEC Price Cap Order, relied on data from 1929-1989.[74/] When updated through 1993, the Spavins-Lande study yields a productivity offset of 2.1 percent. When post-divestiture data only are considered, the Spavins-Lande method yields a productivity offset of 2.4 percent.[75/]

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73. See USTA Comments, Attachment A, Christensen Appendix 3; USTA Comments, Attachment C, NERA Study, at 2 - 13.

74. Fourth Further Notice at ¶ 104.

75. See USTA Comments, Attachment C, NERA Study, at 31.

Issue 3f: *If we adopt fixed X-Factors, when should the next performance review be scheduled?*

The Commission conducted its performance review of the LEC price cap plan after the first three years of operation because of the uncertainty associated with a new regulatory regime. The Commission now has five years of experience with the LEC price cap plan and seven years of experience with price cap regulation of AT&T.

BellSouth does not believe that conditions in the LEC interstate access markets will require another performance review, but rather a proceeding to remove LECs from price cap regulation altogether. Because of the complexity of and resources required for a price cap performance review, BellSouth recommends that if the Commission desires to schedule another review now, it should allow at least five years for the current plan to operate without interruption. As the Commission has acknowledged, frequent performance reviews dull the incentive structure that price caps were designed to provide.[76]

5. Number of X-Factors.

Issue 4: *Should there be multiple X-Factors in the long-term cap plan and, if so, how many should there be and how should they be determined?*

In tentatively deciding to develop a price cap plan with multiple X-Factors, the Commission has presented a continuum of three alternatives. On one end of the continuum, the Commission could establish individually tailored X-Factors for each price cap LEC based on performance. On the other end of the continuum, the Commission could establish a single industry-wide X-Factor for all LECs. The third alternative is to adopt multiple X-Factors that would recognize subsets of "like" LECs.

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76. See AT&T Price Cap Order, 4 FCC Rcd at 3141 - 42.

BellSouth believes that the Commission should adopt a single, industry-wide X-Factor. A single X-Factor based on LEC industry average TFP will emulate competition, will be simple to administer, and will be economically meaningful. In support of this overall conclusion, BellSouth has commissioned Dr. Frank M. Gollop of Boston College to evaluate the single versus multiple X-Factor issue. Dr. Gollop's statement is attached to these comments as Attachment 1, and concludes that an industry-average X-Factor based on moving averages is superior to any model of LEC-specific or multiple X-Factors: "A single industry 'X' induces LECs to maximize their productivity growth, is administratively simple, and guarantees that on-going productivity gains by the LECs are passed through to ratepayers."[77/]

As a general proposition, since productivity growth unambiguously enhances public welfare, the Commission should design the X-Factor to provide maximum incentives for LECs to improve productivity.[78/] Furthermore, implicit in this underlying policy directive of the X-Factor is that it should be beyond the LEC's ability to control. If it is not, each LEC will have an incentive to engage in strategic behavior, i.e., each LEC can influence the "X" it will face in future years by altering its current behavior. Unless the X-Factor for each LEC is largely unaffected by the LEC's behavior, it will no longer be in the LEC's self interest to maximize productivity.[79/]

For this reason, the first alternative on the Commission's continuum, establishing LEC-specific X-Factors, is a bad idea, because it reduces each LEC's incentive

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77. Gollop Statement at 1.

78. Id. at 5.

79. Id.

to enhance productivity growth; surpassing the "X" set for the current period only raises the "X" for the next. Carried to its extreme, the calculation of individual company X-Factors based on past performance would amount to a "tax" on superior productivity performance, and an offer of subsidy for inferior performance.[80/] This result would destroy the incentive structure of price cap regulation, and is precisely the opposite of the incentive structure of competitive markets, where productivity improvements are rewarded and market complacency is punished.

Furthermore, the adoption of LEC-specific X-Factors not only reduces the LECs' incentive to seek productivity growth, but also gives individual LECs a degree of market power. By adjusting behavior in the current period to affect its future "X", an individual LEC can affect the price it is permitted to charge in the next period. As Dr. Gollop observes, this result is in direct contradiction to the hallmark characteristic of price-taking behavior in competitive markets.[81/]

Nor is the creation of multiple X-Factors for "homogenous" subsets of LECs (as the Commission has tentatively proposed) the best approach. In this regard, the suggestion in Paragraph 109 of the Fourth Further Notice that varying economic conditions facing different LECs justifies the creation of multiple X-Factors is misplaced. Economic conditions are dynamic. The fact that one region of the country had better business conditions than another in the past does not mean that there will be an imbalance in the economic equilibrium in the future. Demand factors change in different areas of the country at different times, but within those areas, all competitors face the same macroeconomic

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80. Id.

81. Id.

conditions.[82] If the goal of price regulation is to emulate the functioning of a competitive market, the Commission should not seek to force an equality of outcomes among the LECs by trying to predict macro-economic changes.[83]

Indeed, the Commission should expect productivity growth rates to vary significantly among the LECs in the short run. There are numerous sources of productivity growth that are within each firm's control and are not driven solely by external business conditions. Any attempt by the Commission to "adjust" for exogenous sources of productivity without crushing the incentive for individual firms to maximize their productivity improvements is likely to fail.

Although Dr. Gollop shows that economic principles can be used to design a correct set of steps that can (and must) be followed in order to construct multiple X-Factors,

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82. As Dr. Gollop observes:

> A dynamic competitive market does not guarantee equal earnings among firms. Though all firms in a market face similar exogenously imposed competitive pressures, rates of return are not necessarily equal. Productivity performance levels are not necessarily identical. Some product and process investments are successful, others are not. All that is guaranteed is equality of opportunity, the opportunity to "try out" the competitive marketplace.

Id. at 6.

83. Thus, the fact that LECs show different earnings levels or "business conditions," does not imply that LECs are not or should not be responding to the same competitive signals. Id. See also Affidavit of Alfred Kahn, CC Docket No. 94-1, attached to Bell Atlantic Reply Comments (June 29, 1994) ("The competitive ideal is that risks of innovative ventures be borne not by ratepayers but by investors. In this model, ratepayers are not required to bear the losses stemming from unsuccessful investments; by the same token, neither are they permitted to appropriate the profits stemming from successful ones.").

the process is extremely complicated and the results overly sensitive to simplifying assumptions:

> What might be viewed as necessary and otherwise innocent assumptions not only can introduce significant bias both in the calculation of the proper X-adjustments and the assignment of adjustment factors to individual LECs but also will likely introduce perverse incentives, encouraging LECs to reduce rather than enhance their productivity.

Gollop Statement at 12. Adopting multiple X-Factors therefore introduces significant risk into incentive regulation.

Dr. Gollop concludes that, in the end, even if business conditions vary and even if they are believed to affect a firm's potential performance, the simpler industry-average "X" provides a superior form of incentive pricing regulation[84]:

> The relative advantages of a single"X" model are considerable. Combined with a moving-average process, it satisfies all three FCC criteria for an appropriate X-factor paradigm. It is soundly based in economic principles. It guarantees that ratepayers will share in ongoing productivity gains. It is simple to implement and is based on data easily subject to public scrutiny. At best, any multiple X-factor model fails to satisfy, at least, the first and third criteria. At worst, a multiple "X" model may induce firms to engage in strategic behavior in order to change their subset classification and/or the magnitude of their "X" adjustment. *Since productivity growth is unambiguously welfare improving, the X-factor model must be designed to maximize the LECs' incentives to improve productivity. Whether evaluated on this ground alone or on the full set of criteria enunciated by the FCC, the single X-factor paradigm clearly dominates any LEC-specific or multiple "X" model.*

Gollop Statement at 24 (emphasis supplied). In BellSouth's view, a single, industry wide "X-Factor" best emulates the competitive marketplace, and is thus the best policy choice for the Commission.

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84. Gollop Statement at 12.

B. Sharing Requirements and Alternatives

In the First Report and Order, the Commission recognized the damage to the incentive structure of the LEC price cap plan done by the sharing and low-end adjustment mechanisms,[85] and established a long-term goal to eliminate sharing.[86] BellSouth concurs that sharing should be eliminated from the LEC price cap plan, and believes that it should be eliminated now.

Conceptually, the sharing mechanism ties prices to costs by retaining the central concept of rate of return regulation, i.e., by looking to overall accounting earnings on a rate base to measure LEC performance.[87] As the Commission itself recognizes, this approach is fundamentally at odds with the theory of price caps. Price regulation seeks to stimulate carriers to increase profits by becoming more internally and operationally efficient, and by developing new services and technologies. However, if a carrier must share half or all of its significant productivity gains, it will have far less incentive to undertake significant (and potentially risky or disruptive) efficiency initiatives. For the same reason, the carrier will also have far less incentive to innovate or plow back its limited pool of investment funds into infrastructure investment in a heavily regulated area (where its investment return is severely restricted) vis-a-vis other more favorable opportunities in nonregulated areas. Thus, because firms are only permitted to keep a fraction of their efficiency gains, many of the

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85. See First Report and Order, 10 FCC Rcd at 9045-46, ¶¶ 187-89. The Commission also found evidence that reducing sharing obligations might encourage infrastructure development.

86. Id. at 9047, ¶ 193.

87. See LEC Price Cap Order, 5 FCC Rcd at 6801, ¶ 121.

efficiency incentive benefits of a price cap regime are dramatically diluted if a sharing mechanism is retained.[88/]

Adoption of the USTA moving-average X-Factor based on a LEC industry-wide average of TFP will ensure that all of the improvements in productivity by the LECs are available to consumers (depending on the pricing behavior of the IXCs), and thus will eliminate both the perceived need for and inefficiency of the sharing mechanism. Simply put, as the Commission itself acknowledges, if a single, industry-wide moving-average "X" is adopted, there is nothing more to "share."[89/]

The Commission should also recognize that LEC interstate access services are "intermediate" services. Since all of the major IXCs purchase what they perceive to be an optimal mix of those services throughout the country, variations in LEC earnings performance do not affect the overall price of access to the major IXCs, and hence are unlikely to affect the prices charged to consumers.

The question the Commission should be asking is not "How can I ensure that no LEC significantly outperforms the others?" but rather, "How can I ensure that the LECs

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88. The analysis of Strategic Policy Research in the first phase of this proceeding showed that a 4-year hybrid price regulation plan with 50/50 sharing, i.e., a plan similar to the current LEC plan, has only approximately 18 percent of the efficiency incentives provided in unregulated competitive markets. SPR Vision Paper at 22. Indeed, such incentives "only slightly exceed" those under a system of 1-year rate-of-return regulation. Id.

89. As the Commission has observed:

> If the methodology used to set the moving average is properly selected and applied, the X-Factor would be automatically adjusted each year for any increases or decreases in overall LEC performance, including changes in productivity, after whatever lag period is selected. *Thus, the danger of an error in the X-Factor leading to unreasonable high or low rates is reduced substantially, if not eliminated. A backstop to make these same corrections would be superfluous.*
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> First Report and Order, 10 FCC Rcd at 9047, ¶ 192 (footnote omitted) (emphasis supplied).

in aggregate maximize their productivity?" The answer to the latter question is simple: the Commission can ensure aggregate maximum productivity by eliminating sharing now. The elimination of sharing will give each LEC an unambiguous incentive to improve its productivity as much as possible at all times. Indeed, since the Commission has given up direct control over the extent to which consumers receive any benefit from LEC access charge reductions by declaring AT&T non-dominant, the Commission can maximize consumer welfare only by encouraging the LECs to be as efficient as possible.

Issue 5a: *If we establish a plan in which LECs have a choice of X-Factor, what incentive mechanism should be used to encourage each LEC to choose an X-Factor that is appropriate for its economic circumstances? Is it possible to develop an incentive mechanism other than one based on sharing?*

As mentioned above, the Commission can eliminate the concern that gives rise to this issue by adopting a single, industry wide "X-Factor" based on an industry-wide moving average of TFP, as measured by the Christensen simplified TFP model. The Commission should eliminate sharing coincident with the adoption of this model for LEC price caps. All of the other alternatives mentioned in the Fourth Further Notice are suboptimal when compared with BellSouth's recommended approach.

If the Commission creates an incentive structure in which each LEC has an incentive to be as productive as possible all of the time, and then lets the X-Factor adjust to recognize these improvements in productivity through the moving average, LEC customers will realize the full benefits of price cap regulation with no other backstop mechanisms required. Instead of using the elimination of sharing and increased pricing flexibility as "sticks" to drive carriers to self-select a higher X-Factor, the Commission should structure a

simple, efficiency-enhancing scheme for all price cap LECs so that total consumer welfare will be maximized.

Issue 5e: *To what extent and under what conditions would it be possible to eliminate the sharing mechanism from the long-term price cap plan?*

As the Commission correctly noted, the adoption of the USTA five-year moving average TFP proposal to calculate the X-Factor for the long-term LEC price cap plan addresses both the possibility that the X-Factor is mis-specified for the LECs generally, and ensures that all of the benefits of LEC productivity improvements are made available to LEC customers over time. The adoption a single, industry-wide LEC "X-Factor" eliminates the concern about sub-optimum selection of X-Factors by various LECs. Under these circumstances, the Commission should take the step suggested in Paragraph 127 of the Fourth Further Notice and eliminate sharing altogether from the LEC long-term price cap plan.

Issue 5f: *Should the low-end adjustment mechanism be eliminated?*

Coincident with the elimination of sharing, the Commission should eliminate the low-end adjustment mechanism. While it does not pose the same direct hindrance to efficiency and productivity incentives, the low-end adjustment mechanism is also an inappropriate rate of return construct that has no place in a price cap regime. For price caps to truly function as they are intended, the Commission must sever **all** conceptual links between prices and earnings. Any LEC that is unreasonably disadvantaged by the long-term price cap plan can attempt to meet the stringent showing required for an above-cap filing.[90/]

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90. In the unlikely event that a properly designed LEC price cap formula drove a carrier's earnings to confiscatory levels, the Commission's present plan makes provision for filing above-cap rates. See LEC Price Cap Order, 5 FCC Rcd at 6823, ¶ 303.

C. Common Line Formula

Issue 6a: *Under what circumstances would the adoption of a particular X-Factor method justify elimination of a separate common line formula?*

If the Commission adopts the simplified USTA TFP proposal, all productivity gains resulting from increased demand over non-traffic sensitive plant will appear as improvements in productivity, and will inure to the benefit of LEC customers. Specifically, the output growth measure in the TFP calculation is carrier Common Line ("CCL") minutes of use ("MOU"), which thus includes the full productivity effects of growth in minutes.[91/] Because TFP already incorporates the effects on overall productivity of all productive inputs, any common line formula which includes an adjustment for demand growth (such as the current Balanced 50/50 formula) effectively "double counts" the productivity gains already reflected in the measure of TFP. Accordingly, there is no need for a separate common line formula in the long-term LEC price cap plan.

Issue 6b: *Assuming we decide to retain a separate common line formula, should we adopt a per-line common line formula or some other formula? What should the mechanics of that formula be?*

The Commission has tentatively concluded that LECs have relatively little influence over growth in common line usage, and therefore that a per-line common line formula is superior to a per-minute or balanced 50-50 approach because it recognizes that loop costs are not traffic sensitive. If a separate common line formula is adopted, then the Commission should reduce the calculated "X-Factor" by 0.8 percent, as recommended by Sprint and AT&T.[92/]

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91. See USTA Comments at 49.

92. See First Report and Order, 10 FCC Rcd at 9076, ¶ 262.

D. **Exogenous Costs**

Issue 7a: *Is it feasible to fashion an X-Factor that will routinely include costs currently classified as exogenous and exclude costs that the Commission has determined are not exogenous?*

Issue 7b: *Would it be reasonable to limit exogenous cost treatment to changes that result in a jurisdiction cost shift?*

The Fourth Further Notice seeks comment on whether adoption of the USTA five year moving average TFP method or some other method to calculate the X-Factor eliminates the need to consider separately adjustments for exogenous costs. BellSouth believes that these are separate issues.

TFP recognizes changes in economic factors which affect LEC inputs and outputs. The LEC price cap plan, however, was initialized based on prices developed in a cost-of-service environment. Such prices reflected interstate accounting costs rather than economic costs. Thus, for example, to the extent that Part 32 accounting required the deferred recognition of certain costs that GAAP accounting would otherwise have recognized in the current period, the initial price cap rates did not result in recovery of these costs. Thus, the Commission was clearly wrong in the First Report and Order when it restricted exogenous treatment to costs affecting LEC discounted cash flow.[93/] That issue is currently pending before the Court of Appeals. BellSouth believes that it is premature to attempt to fashion long-term exogenous cost rules until that mistake is corrected.

93. See id. at 9090, ¶ 293.

Issue 8: *Regardless of whether we establish a moving average mechanism to incorporate automatically changes in unit costs into the X-Factor, would it be desirable to schedule a LEC price cap performance review, and, if so, when?*

As discussed previously, BellSouth believes that competition for LEC interstate access services is developing at a sufficient pace that the Commission will find it appropriate to eliminate LEC price cap regulation before another performance review would be necessary. In any event, the adoption of the USTA proposal to calculated the X-Factor as a moving average of outputs from the Christensen simplified TFP approach also eliminates the need for a further performance review.

III. ISSUES DEFERRED FROM THE PRICING FLEXIBILITY NOTICE

In the Order on Motion for Extension of Time, DA 95-2361, released November 21, 1995, the Commission invited carriers to file their comments on Issues 19 and 20 of the Pricing Flexibility Notice together with their comments in this proceeding. BellSouth has already addressed the problems associated with multiple X-factors above. BellSouth offers the following additional comments regarding Issues 19b, 20a and 20b of the Pricing Flexibility Notice below.

Issue 19b: *If we adopt mandatory X-Factors, should we include considerations based on competitive circumstances in our assignment of an X-Factor to each LEC? Should the higher X-Factors be assigned to LECs facing less competition or more competition? What methods of measuring the extent of competition would be appropriate for this purpose?*

In the Pricing Flexibility Notice, the Commission has asked whether the X-Factor should or can be adjusted based upon differences in competition that each LEC faces. As Dr. Gollop points out, there are at least three fundamental problems with this approach.

The principal problem with the Commission's suggestion is that it is based upon a fundamentally incorrect characterization of the relationship between competition and

productivity growth.[94] Adjustments should be made to X-Factor only on the basis of truly exogenous business conditions, such that the LEC cannot control the response of its productivity growth to changes in the business conditions.[95] As Dr. Gollop explains, variations in the "extent of competition" simply do not meet this exogenity standard.[96]

The second problem with adjusting an industry X-Factor for competitive differences across LECs is suggested in the Commission's second question above, i.e., that there is no clear inference to be drawn from any observed correlation between the state of competition in a market and the average rate of productivity growth within that market. As Dr. Gollop notes:

> For example, if above-average productivity growth rates and above-average competition are correlated, is the high level of productivity growth a result of competitive pressure or is competitive entry being induced by above-average productivity growth and earnings? Alternatively, if below-average productivity growth rates are correlated with above-average competition, is competitive pressure somehow reducing the potential for investment in productivity improvements or are observed low rates of productivity performance inducing entry by firms believing they can out-perform the dominant incumbents?

Gollop Statement at 21 - 22. The difficulty is that the direction of causation cannot be determined from theory -- it is fundamentally an empirical question.[97]

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94. See Gollop Statement at 21.

95. See id. at 21. An exogenous business condition "becomes a prima facie candidate for an adjustment factor if and only if is determined that variations in the business condition naturally and inevitably diminish or augment a LEC's productivity growth." Id.

96. Id.

97. See id. at 22.

Finally, the Commission faces a substantial implementation problem if it decides to take competitive differences into account. Simply put, "how is 'competition' to (a) be measured and (b) converted into some metric for adjustment purposes?"[98]

In sum, BellSouth believes that an X-Factor adjustment based on "competitive circumstances" is not appropriate. In the final analysis, it is an approach which derives from the relationship between competition and earnings, and not from the relationship between competition and productivity growth.[99] To this extent, it is fundamentally inconsistent with the underlying theory of a price cap regime, which should be geared toward breaking -- and not reinforcing -- the link with earnings-based regulation.

Issue 20a *Is NYNEX's proposal a reasonable one? Should we adopt it in some modified way? For example, if we are to retain sharing, should we adjust the specific sharing bands, change the number of levels of regulation, or include or exclude certain criteria from NYNEX's checklists?*

Issue 20b: *Under what circumstances could competition be used to replace the "flow-through" function of sharing? What incentives and disincentives are created by linking sharing and competition? Is it logical to establish wider sharing ranges as intermediate steps to the elimination of sharing? If so, how would such steps be reconciled with our policy of encouraging price cap companies to increase their productivity? If it is reasonable to link competition and the elimination of sharing, are other measures of competition more appropriate than those suggested by NYNEX? (Parties may refer to their discussion of the issues raised in Section IV.C. above.)*

The Commission has invited comment on a proposal by NYNEX to tie the elimination of sharing to a convoluted set of criteria dealing with the evolution of competition in local exchange markets. BellSouth has demonstrated above that sharing should be

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98. Id.

99. Id.

eliminated now. It is a vestige of rate of return regulation that severely damages LEC incentives to improve productivity.

The NYNEX proposal fails to meet all three criteria established by the Commission in this proceeding. It is not economically meaningful; it does not ensure that ongoing changes in LEC unit costs are passed through to consumers; and it is enormously difficult to administer.

Moreover, the NYNEX proposal would embroil the Commission in a jurisdictional quagmire. NYNEX proposes to tie the elimination of sharing in the LEC interstate price cap plan to changes in intrastate local exchange market conditions. In BellSouth's view this combination is inherently unworkable.

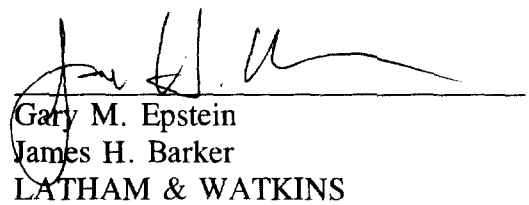
Finally, the NYNEX proposal would cause significant delays in public realization of the benefits of pure price cap regulation of the LECs. For these reasons, BellSouth opposes the NYNEX proposal.

IV. CONCLUSION

The Commission should adopt a price cap plan that eliminates sharing, fosters the development of a pure price cap plan, and ultimately facilitates the transition of the LECs out of price caps altogether. The Commission should adopt a single productivity factor calculated as a LEC industry "moving average" of TFP that simulates competition, is simple to administer and is economically meaningful. The more that the Commission does to eliminate once and for all the vestiges of rate of return regulation, and correspondingly to enhance aggregate LEC productivity, the more that United States consumers will benefit.

Respectfully submitted,

BELLSOUTH TELECOMMUNICATIONS, INC.



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